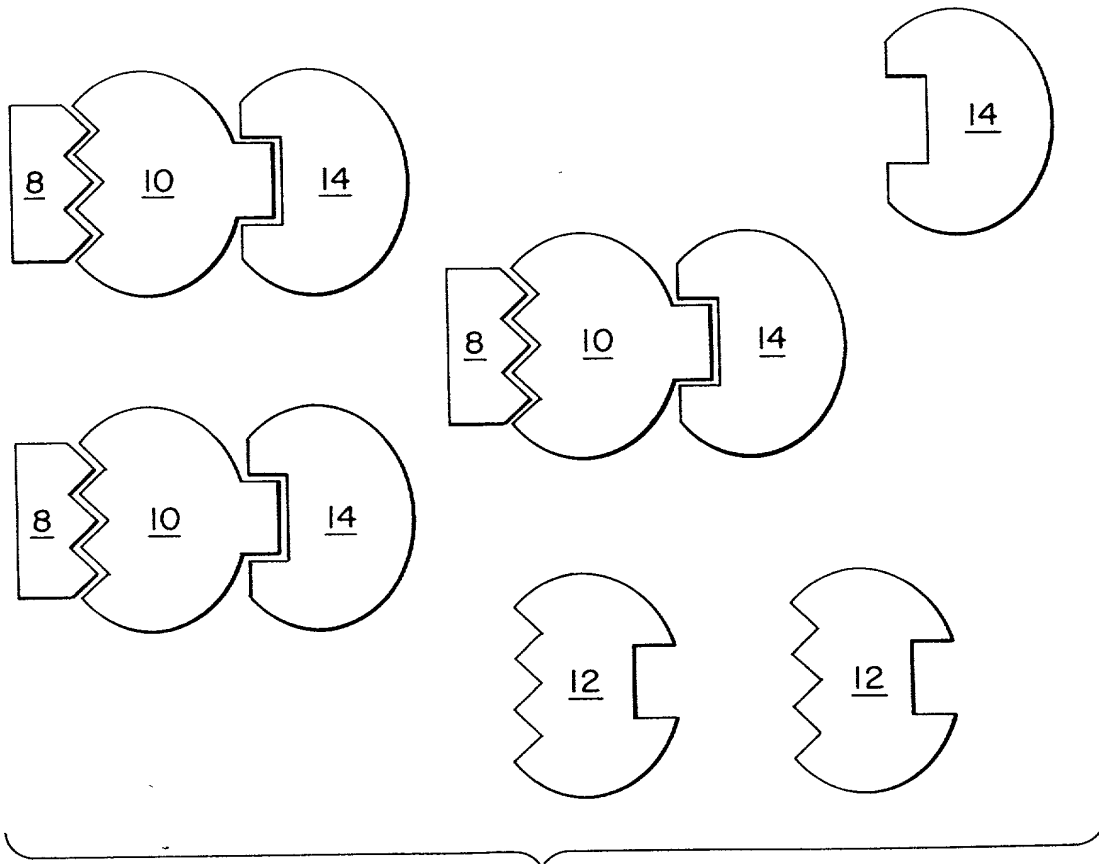
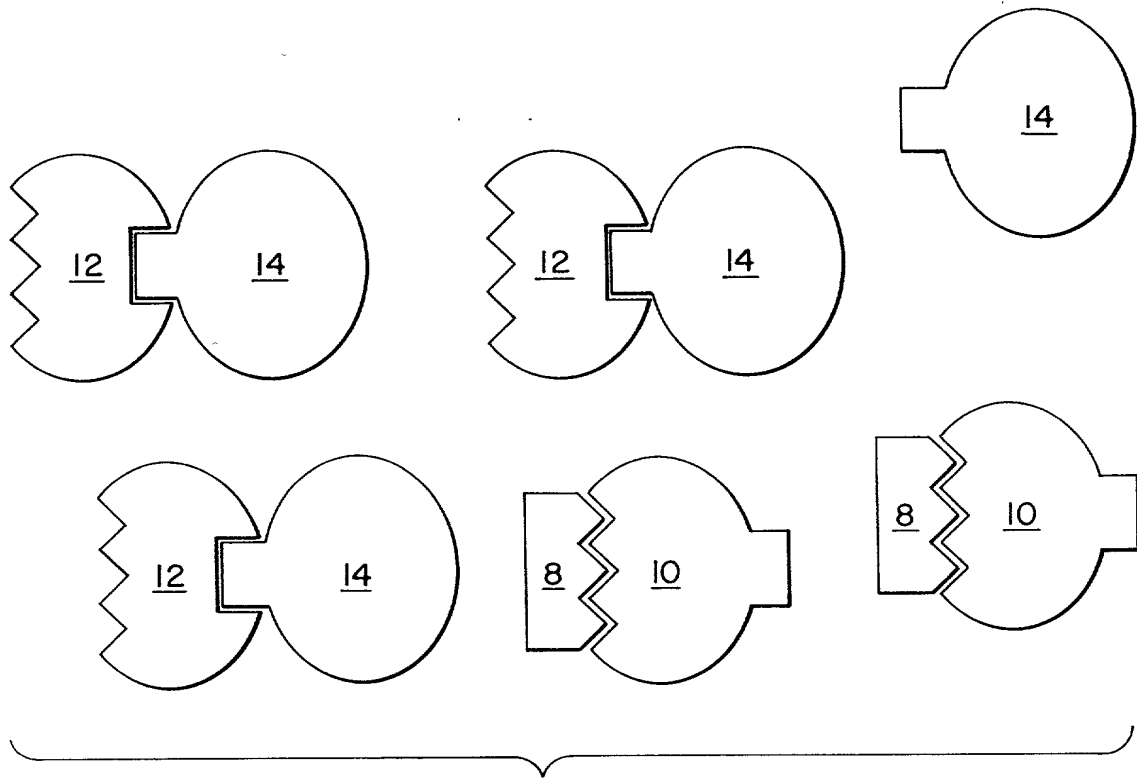


**FIG. 1A**

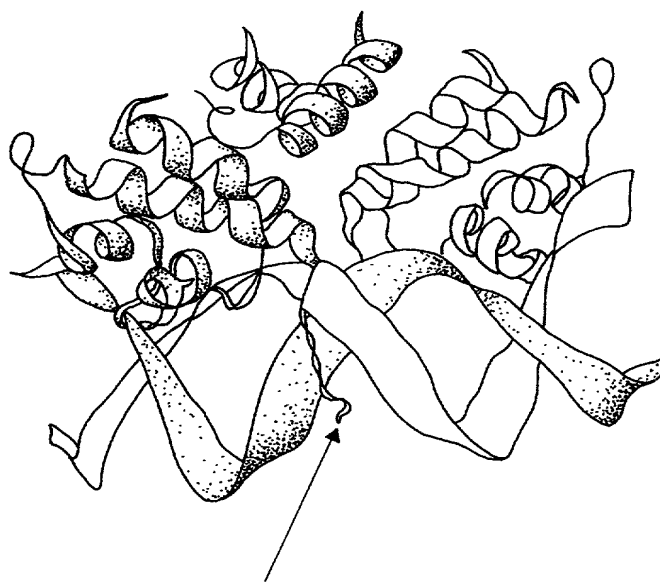


**FIG. 1B**



***FIG. 1C***

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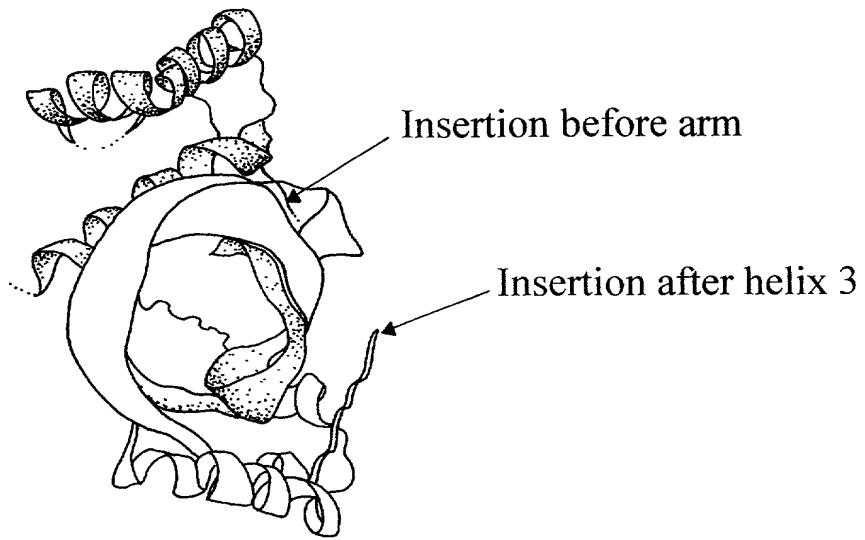


Insertion before arm

***FIG. 2***

10032827.041602

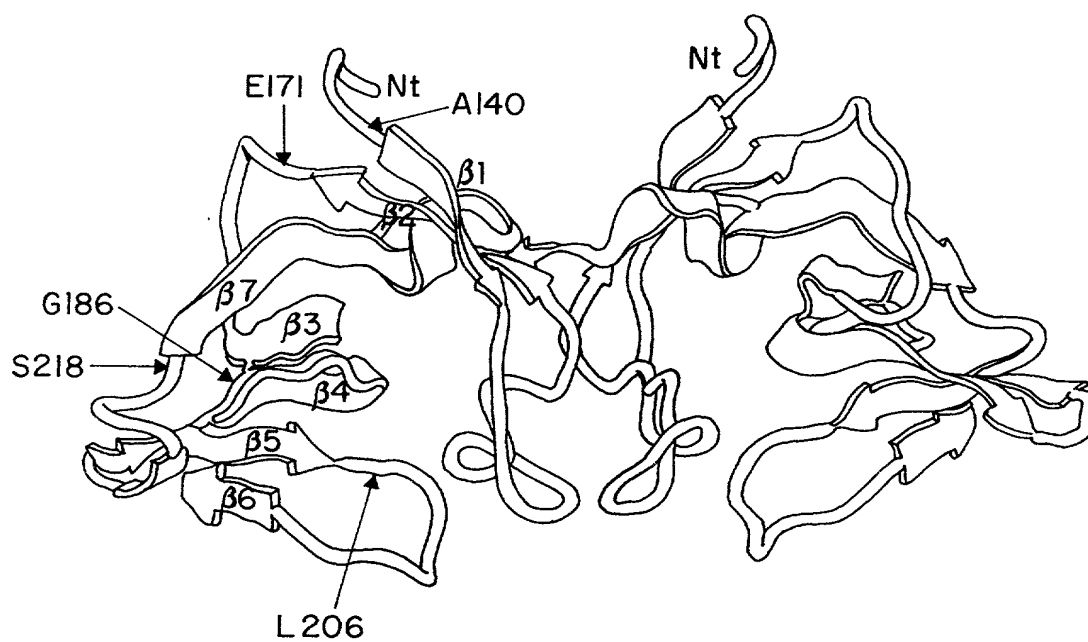
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***FIG. 3***

10032827.041602

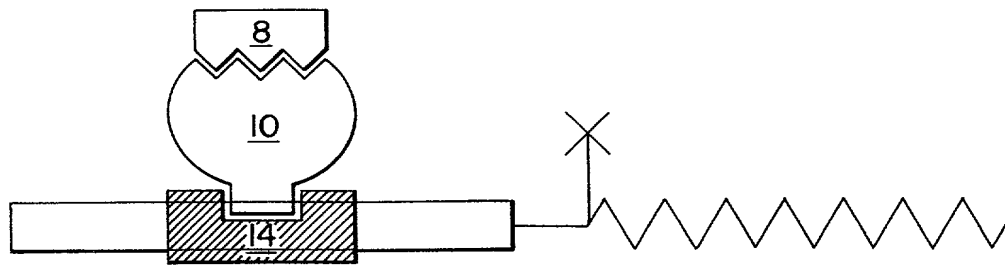
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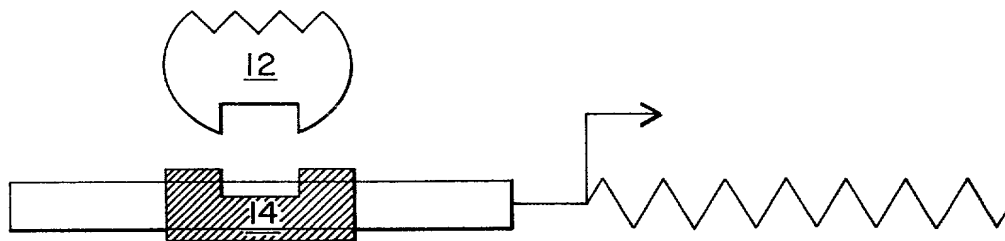
**FIG. 4**

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# SIMPLE BINARY SWITCH




STIMULUS PRESENT



STIMULUS ABSENT

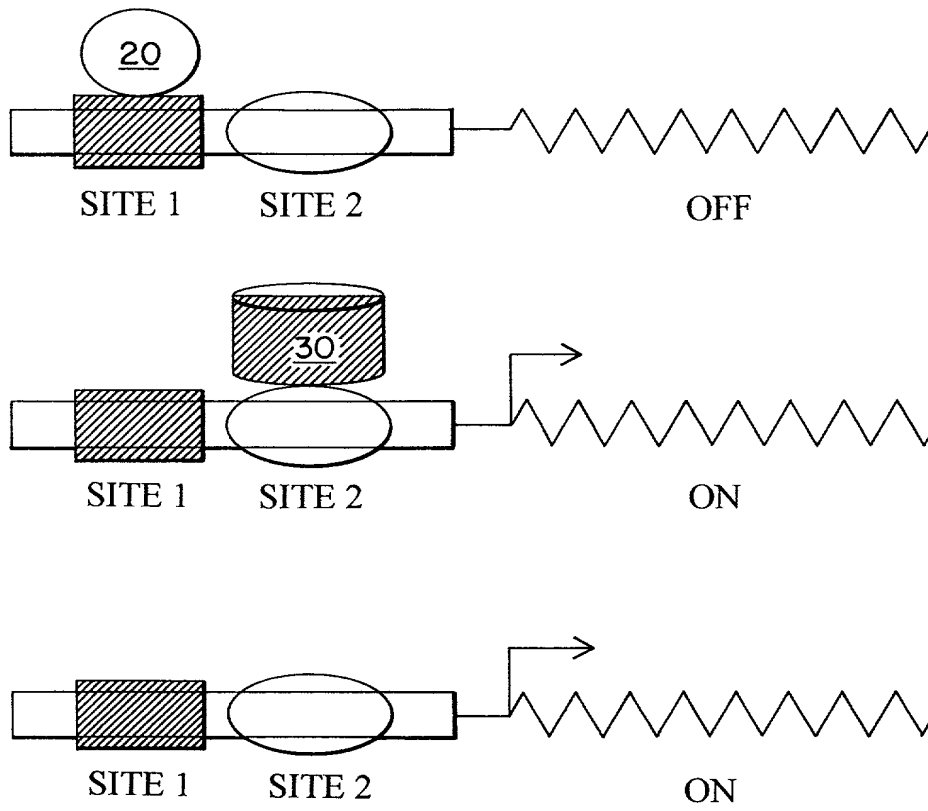
 AN ACTIVE PROMOTER

 REPRESSOR BINDING SITE

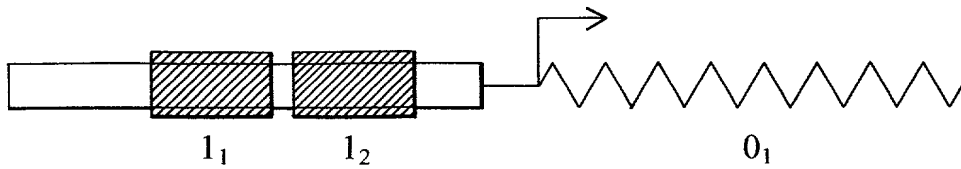
 REPORTER GENE

**FIG. 5**

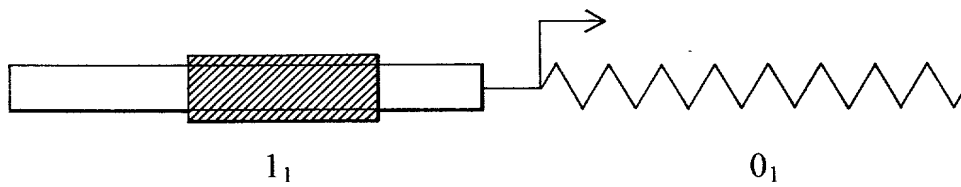
## FLIP-FLOP

*FIG. 6*

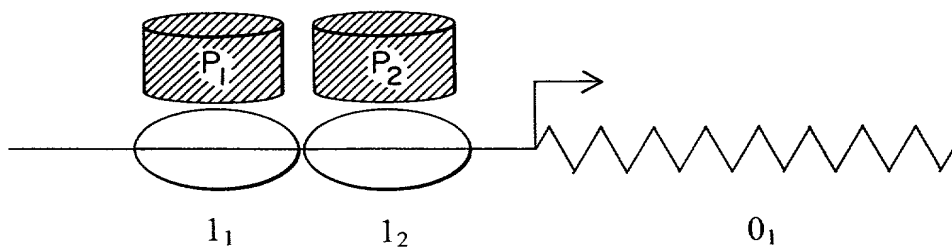
NOR GATE:

*FIG. 7A*

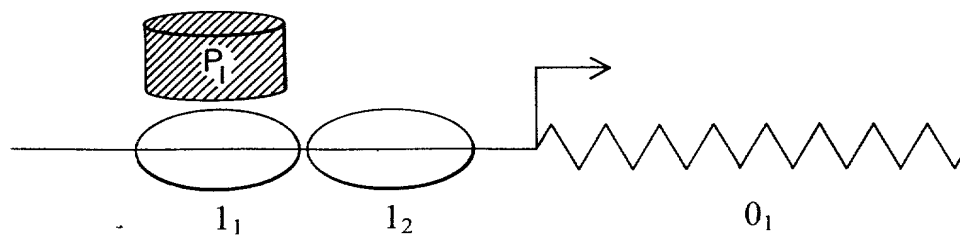
NOT GATE:

*FIG. 7B*

AND GATE:

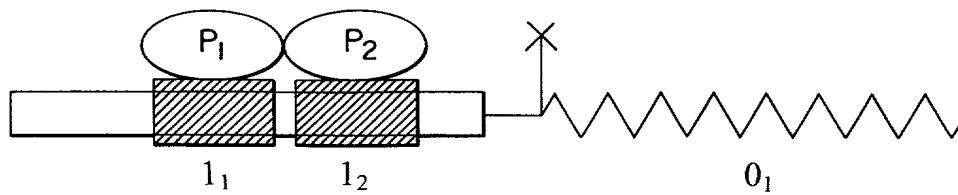
*FIG. 7C*

OR GATE:

*FIG. 7D*

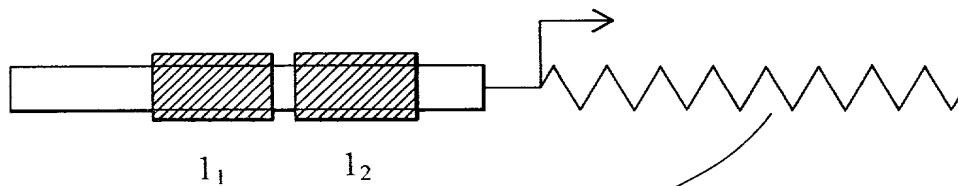


NAND GATE:

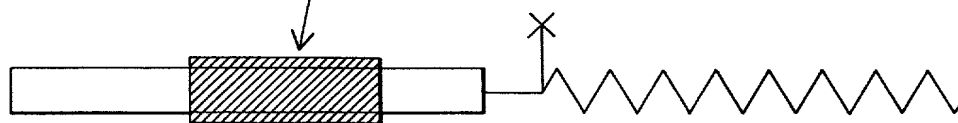


**FIG. 7E**

GATE A (NOR)



GATE B (NOT)



**FIG. 8**

209140/2882E001

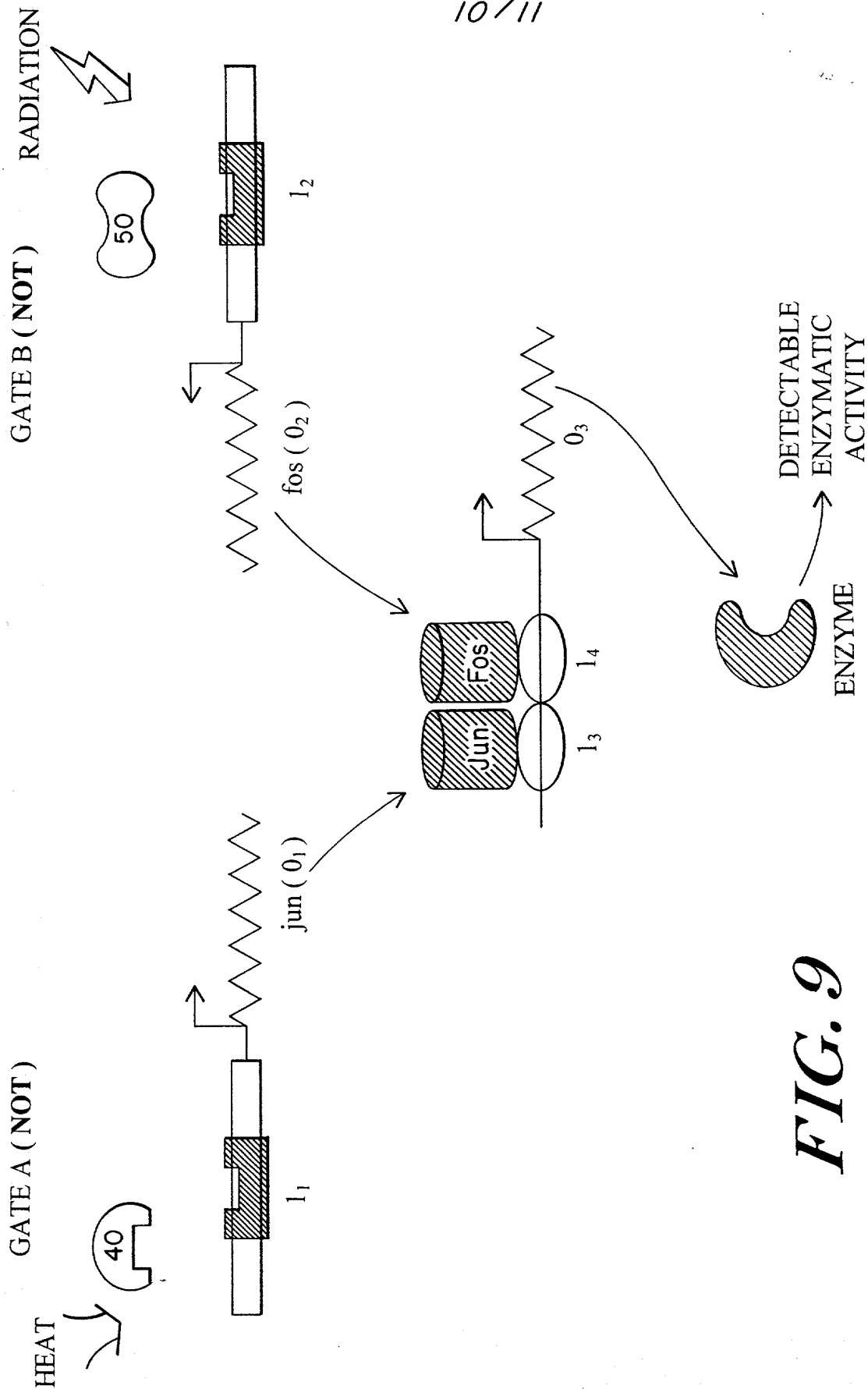
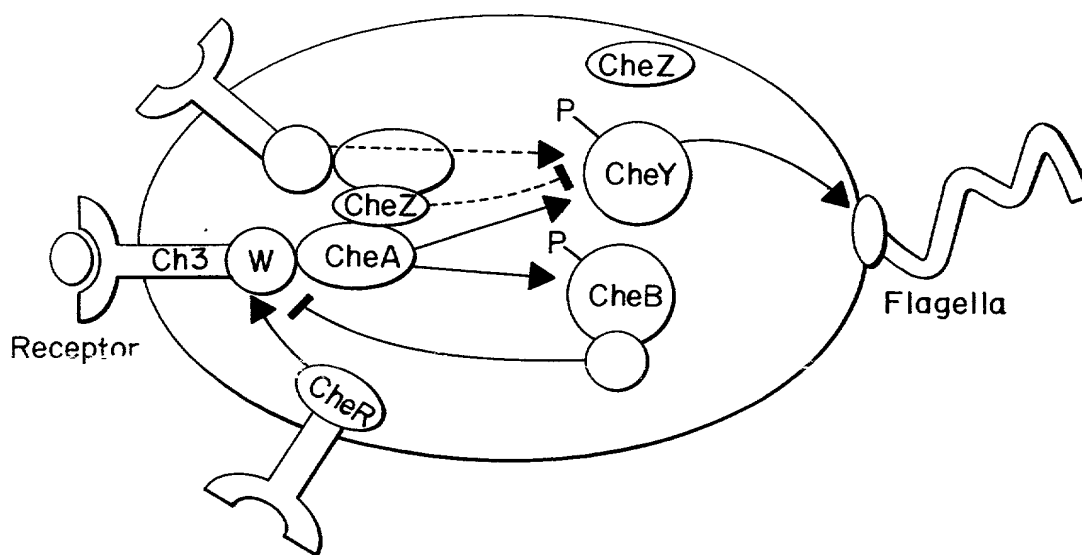


FIG. 9

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**FIG. 10**